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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,917	01/25/2001	Noriaki Matsui	1232-4675	6157
27123	7590	05/13/2005	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			THOMPSON, JAMES A	
			ART UNIT	PAPER NUMBER

2624

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/769,917

Applicant(s)

MATSUI ET AL.

Examiner

James A Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-23 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 13, lines 6-12, filed 23 November 2004, with respect to the rejections of claims 22 and 23 under 35 USC §112, 2nd paragraph, listed in items 2-4 of the previous office action, dated 16 August 2004, have been fully considered and are persuasive. The rejections of claims 22 and 23 under 35 USC §112, 2nd paragraph have been withdrawn.

2. Applicant's arguments, see pages 14-16, filed 23 November 2004, with respect to the rejections of claims 1, 11, 12, 14, 15 and 25 under 35 USC §103(a) have been fully considered and are persuasive. The present amendments to claims, particularly the limitations regarding the memory adapted to store a predetermined time, overcome the prior art previously cited. Therefore, the rejections under 35 USC §103(a) have been withdrawn. However, upon further consideration, new grounds of rejection are made in view of the references listed below in the prior art rejections. The amendments to claims 1, 11, 12, 14, 15 and 25 have necessitated the new grounds of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

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Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-9, 11, 15-23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumashiro (US Patent 5,864,408) in view of Kerschner (US Patent 5,995,243).

Regarding claims 1, 11, 15 and 25: Kumashiro discloses an apparatus (figure 1 and figure 2 of Kumashiro) comprising a light source adapted to illuminate a document (column 8, lines 25-29 of Kumashiro); a plurality of image sensing elements (figure 1(21) of Kumashiro) adapted to output electrical signals in accordance with an input light quantity (column 6, lines 23-26 and lines 33-36 of Kumashiro); a first reference member (figure 1(14) and column 6, lines 23-25 of Kumashiro); a second reference member (figure 1(20) and column 6, lines 23-26 of Kumashiro); a memory (figure 2(35(portion)) of Kumashiro) adapted to store a predetermined number of sheets that are read (column 12, lines 30-34 of Kumashiro) since said light source is turned on until a maximum of electrical signals output from said plurality of image sensing elements at the time said light source is turned on changes a predetermined rate (figure 4a; figure 5a; and column 8, lines 23-30 of Kumashiro); a timer (figure 2(35(portion)) of Kumashiro) adapted to measure a the number of sheets read since said light source is turned on (column 12, lines 30-34 of Kumashiro); and a controller (figure 2(35(portion)) of Kumashiro) adapted to determine whether the number of sheets measured by said timer reaches the predetermined number of sheets (column 12, lines 30-34 of Kumashiro), in the case that the predetermined number of sheets has not been read, acquire shading correction data by a first method (column 11, lines 57-61 of Kumashiro) using said first

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reference member illuminated by said light source (column 11, lines 61-65 of Kumashiro), and in a case that the predetermined number of sheets have been read, acquire shading correction data by a second method (column 11, lines 57-61 of Kumashiro) using said second reference member illuminated by said light source (column 12, lines 30-38 of Kumashiro). Kumashiro teaches that, due to a difference in height between the first reference member and the second reference member, a correction value must be included to compensate for the difference (column 11, lines 57-61 of Kumashiro). Therefore, a different overall method than the second method, which is used for the second reference member, must be used for the first reference member. Further, Kumashiro teaches that the CPU (figure 2(35) of Kumashiro) controls the overall system (column 6, lines 60-63 of Kumashiro). Therefore, the memory, timer and controller are the specific portions of the CPU, along with the associated computer memory and embodied software, that perform the functions corresponding to the memory, timer and controller.

Kumashiro further discloses that the amount of light emitted from the light source decreases with time (figure 4a; figure 5a; and column 8, lines 23-30 of Kumashiro). Further, the number of sheets that are read directly corresponds to the amount of time that has elapsed from when the light source was turned on (figure 5a and column 8, lines 25-30 of Kumashiro).

However, Kumashiro does not specifically disclose that a predetermined time is stored and measured, instead of a predetermined number of sheets.

Kerschner discloses calibrating the illumination conditions of a scanner periodically, and thus at a predetermined time (column 3, lines 62-67 of Kerschner).

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Kumashiro and Kerschner are combinable because they are from the same field of endeavor, namely the control of digital scanning devices. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to calibrate the scanner illumination specifically based on a predetermined time, as taught by Kerschner, instead of indirectly basing said predetermined time on the number of sheets scanned, as taught by Kumashiro. The motivation for doing so would have been that, after a particular amount of time, the light level of a scanner light source decreases by a specific amount (figure 5a and column 8, lines 23-30 of Kumashiro), thus it would have been logical to one of ordinary skill in the art at the time of the invention to store and measure the amount of time directly. Therefore, it would have been obvious to combine Kerschner with Kumashiro to obtain the invention as specified in claims 1, 11, 15 and 25.

Regarding claims 2 and 16: Kumashiro discloses that, in the first method, a coefficient for uniformly changing level of the shading correction data is generated on the basis of data obtained by scanning said first reference member by said image sensing elements (column 11, lines 46-56 of Kumashiro), and in the second method, shading correction data of each pixel in a main scanning direction is generated by scanning said second reference member by said image sensing elements (column 12, lines 30-38 of Kumashiro).

Regarding claims 3 and 17: Kumashiro discloses a correction unit (figure 2(24) and column 6, lines 30-34 of Kumashiro) which uses the shading correction data to perform shading correction (column 6, lines 38-47 of Kumashiro) on the electrical signals output from said image sensing elements

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(column 6, lines 39-45 of Kumashiro), by using the first shading correction data (column 11, lines 46-56 of Kumashiro) or the second shading correction data (column 12, lines 30-38 of Kumashiro).

Regarding claims 4 and 18: Kumashiro discloses that said first and second reference members comprise white plates (column 6, line 1 and line 15 of Kumashiro).

Regarding claims 5 and 19: Kumashiro discloses that said first reference member is set at an end portion of a main scanning direction (column 6, lines 1-3 of Kumashiro) at a predetermined position of a subscanning direction (column 6, lines 11-14 of Kumashiro), and said second reference member is set in the main scanning direction at a predetermined position in the subscanning direction (column 6, lines 15-20 of Kumashiro).

Regarding claim 6: Kumashiro discloses that the determination by said controller is performed before each document sheet is read (column 9, lines 24-31 of Kumashiro).

Regarding claims 7 and 21: Kumashiro discloses a document feeder (column 5, lines 51-56 of Kumashiro) capable of successively supplying a plurality of document sheets (column 5, lines 64-67 of Kumashiro), wherein said controller performs said determination and said acquisition of the first shading correction data or the second shading correction data (column 9, lines 24-31 of Kumashiro) in a case that the document feeder supplies each document sheet to a predetermined position (column 6, lines 11-14 of Kumashiro).

Regarding claims 8 and 22: Kumashiro discloses determining whether a document sheet is a first document sheet after the light source is turned on (figure 4a("First Sheet") and column

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10, lines 63-67 of Kumashiro), wherein in a case that the document sheet is determined to be the first document sheet, said acquisition step of the second shading correction data is executed before the start of read of the document sheet regardless of a result of determining whether the measured time reaches the predetermined time (column 10, lines 63-67 of Kumashiro).

Regarding claim 9: Kumashiro discloses that, in a case that a first document sheet is to be read after said light source is turned on (figure 4a("First Sheet") and column 10, lines 63-67 of Kumashiro), and the predetermined time has not elapsed (column 12, lines 30-34 of Kumashiro), said controller skips acquisition of shading correction data using said first reference member (column 8, line 66 to column 9, line 6 of Kumashiro). The second reference member is used for the reference white when the first sheet is read (column 8, line 66 to column 9, line 2 of Kumashiro). Reading the first reference member is skipped until after the first document has been fully read (column 9, lines 2-6 of Kumashiro).

Regarding claim 20: Kumashiro discloses that said determination and said acquisition of the first shading correction data or the second shading correction data are performed before each document sheet is read (column 9, lines 24-31 of Kumashiro).

Regarding claim 23: Kumashiro discloses that, in a case that the document sheet is determined to be the first document sheet (figure 4a("First Sheet") and column 10, lines 63-67 of Kumashiro), said acquisition of the first shading correction data is skipped regardless of the result of determining whether the measured time reaches the predetermined time (column 8, line

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66 to column 9, line 6 of Kumashiro). The second reference member is used for the reference white when the first sheet is read (column 8, line 66 to column 9, line 2 of Kumashiro). Reading the first reference member is skipped until after the first document sheet has been fully read (column 9, lines 2-6 of Kumashiro). Skipping the first reference member is always done for the first document sheet, and is therefore done regardless of the result of determining whether the measured time reaches the predetermined time.

5. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumashiro (US Patent 5,864,408) in view of Kerschner (US Patent 5,995,243) and Stephenson (US Patent 5,980,010).

Regarding claims 12-14: The arguments regarding claims 1, 11, 15 and 25 are incorporated herein.

Kumashiro further discloses a correction unit (figure 2(24) and column 6, lines 30-34 of Kumashiro) adapted to correct the electrical signals output from said image sensing elements (column 6, lines 39-45 of Kumashiro), and to output an image signal (column 6, lines 60-61 of Kumashiro); and an output unit (figure 2(35(portion)) of Kumashiro) adapted to output the image signals corrected by said correction unit to an external device via a communication line (figure 2(36) and column 6, lines 60-63 of Kumashiro), wherein said correction unit performs shading correction using at least the shading correction data (column 6, lines 39-45 of Kumashiro). The CPU (figure 2(35) of Kumashiro) also controls output of the correction unit (column 6, lines 60-63 of Kumashiro) along a system bus (figure 2(36) of Kumashiro). The output unit is the portion of the CPU, along with the

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associated computer memory and embodied software, that performs the functions corresponding to the output unit.

Kumashiro in view of Kerschner does not disclose expressly an input unit adapted to input an image signal from the external device via the communication line; and a print unit adapted to print an image on a print medium on the basis of the image signal input via said input unit, wherein said print unit prints an image on a print medium on the basis of the image signal input via said input unit.

Stephenson discloses an input unit (figure 5(20) of Stephenson) adapted to input an image signal from the external device via a communication line (column 4, lines 19-23 of Stephenson); and a print unit (figure 5(28) of Stephenson) adapted to print an image on a print medium on the basis of the image signal input via said input unit (column 4, lines 28-35 of Stephenson).

Kumashiro in view of Kerschner is combinable with Stephenson because they are from the same field of endeavor, namely the control of digital scanning devices. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a print unit, with a corresponding input unit to said print unit, that prints the resultant corrected image signal, corrected by said correction unit. The motivation for doing so would have been to provide a physical output of the image, which is a generally desirable result in image processing. Therefore, it would have been obvious to combine Stephenson with Kumashiro in view of Kerschner to obtain the invention as specified in claims 12-14.

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Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James A. Thompson
Examiner
Art Unit 2624

JAT
18 April 2005



THOMAS D.
~~THOMAS D.~~ LEE
PRIMARY EXAMINER